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FIRST NAMED INVENTOR APPLICATION NO. FILING DATE ATTORNEY DOCKET NO. CONFIRMATION NO. 09/917,198 07/27/2001 62357-8005.US01 Lakshminarayanan Gunaseelan 8315 **EXAMINER** 22918 10/20/2006 PERKINS COIE LLP JACOBS, LASHONDA T P.O. BOX 2168 ART UNIT PAPER NUMBER MENLO PARK, CA 94026 2157

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)	
Office Action Summary		09/917,198	GUNASEELAN ET AL.	
		Examiner	Art Unit	
		LaShonda T. Jacobs	2157	
Period fo	The MAILING DATE of this communication app or Reply	pears on the cover sheet with the c	orrespondence address	
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).				
Status	•			
1)⊠	Responsive to communication(s) filed on 24 Ju	<i>ıly</i> 2006.		
2a)⊠	This action is FINAL . 2b) This	action is non-final.		
3)	3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.			
Dispositi	on of Claims			
5) [6) [7) [4) Claim(s) 1-11,13-21,24,25,28,40-50 and 52-56 is/are pending in the application. 4a) Of the above claim(s) is/are withdrawn from consideration. 5) Claim(s) is/are allowed. 6) Claim(s) 1-11,13-21,24,25,28,40-50 and 52-56 is/are rejected. 7) Claim(s) 27 and 51 is/are objected to. 8) Claim(s) are subject to restriction and/or election requirement. 			
Applicati	on Papers			
 9) The specification is objected to by the Examiner. 10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. 				
,—		rammer. Note the attached Office	7.000 01 10 m 1 1 0 - 132.	
•	under 35 U.S.C. § 119			
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 				
Attachment(s)				
	1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413)			
2) Notice 3) Information	te of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO-1449 or PTO/SB/08) or No(s)/Mail Date	Paper No(s)/Mail Da		

Response to Amendment

This is a Final Office Action in response to Applicants' Amendment and Request for Reconsideration filed on April 7, 2006. Claims 1-11, 13-21, 24-25, 28, 40-50 and 52-56 are presented for further examination.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 2. Claims 1-21, 24-26, 40 and 54 are rejected under 35 U.S.C. 102(b) as being anticipated by Krause et al (hereinafter, "Krause", U.S. Pat. No. 5,877,812).

As per claims 1 and 13, Krause discloses a delivery system for use in a client server computer architecture in which the server provides streaming media assets to at least one client over a computer network, wherein the media assets can have a plurality of data formats, comprising:

• a packet producer that acquires at least one streaming media asset in packetized form and places time stamps on the packets, each time stamp specifying a delivery time for its respective packet, wherein the packet producer adjusts the delivery time of at least one time stamp in accordance with a value indicating a pre read size capability of a receiving client (col. 7, lines 1-11 and col. 10, lines 54-64);

- a time stamp packet queue containing the packets with time stamps in a first in, first out order (col. 10, lines 20-37); and
- a feeder module that removes packets from the time stamp packet queue and transmits
 the removed packets to a client via the computer network, the transmission for each
 packet concluded at least by the specified delivery time in each packet (col. 10, lines 3855).

As per claims 12 and 40, discloses a delivery system for use in a client server computer architecture in which the server provides streaming media assets to at least one client over a computer network, wherein the media assets can have a plurality of data formats, comprising:

- a packet producer that acquires at least one streaming media asset in packetized form and places time stamps on the packets, each time stamp specifying a delivery time for its respective packet, wherein the packet producer adjusts the delivery time of at least one time stamp in accordance with a value indicating a pre read size capability of a receiving client (col. 7, lines 1-11 and col. 10, lines 54-64);
- a time stamp packet queue containing the packets with time stamps in a first in, first out order (col. 10, lines 20-37); and
- a feeder module that removes packets from the time stamp packet queue and transmits the removed packets to a client via the computer network, the transmission for each packet concluded at least by the specified delivery time in each packet, the feeder module comprising a stream reader and a stream processor, the stream processor configured to process data in accordance with a predetermined data format, the stream reader obtaining a streaming media asset in the form of a packetized stream of data and

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passes it to the stream processor, the stream processor placing delivery time stamps on the received data packets, wherein at least one of the time stamps is adjusted for an early in accordance with the receiving client's pre-read size capability (col. 10, lines 38-64).

As per claim 26, discloses a delivery system for use in a client server computer architecture in which the server provides streaming media assets to at least one client over a computer network, wherein the media assets can have a plurality of data formats, comprising:

- a packet producer that acquires at least one streaming media asset in packetized form and places time stamps on the packets, each time stamp specifying a delivery time for its respective packet, wherein the packet producer adjusts the delivery time of at least one time stamp in accordance with a value indicating a pre read size capability of a receiving client (col. 7, lines 1-11 and col. 10, lines 54-64);
- a time stamp packet queue containing the packets with time stamps in a first in, first out order (col. 10, lines 20-37); and
- a feeder module that removes packets from the time stamp packet queue and transmits the removed packets to a client via the computer network, the transmission for each packet concluded at least by the specified delivery time in each packet, the feeder module comprising a stream reader and a stream processor, the stream processor configured to process data in accordance with a predetermined data format, the stream reader obtaining a streaming media asset in the form of a packetized stream of data and passes it to the stream processor, the stream processor placing delivery time stamps on the received data packets, wherein at least one of the time stamps is adjusted for a

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delayed delivery in accordance with the receiving client's max buffer size capability (col. 10, lines 38-64).

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As per claims 2 and 14, Krause discloses wherein the packet producer further comprises:

• a stream reader (col. 6, lines 45-49); and

• a stream processor (col. 6, lines 45-49).

As per claims 3 and 15, Krause further discloses:

• a plurality of packet producers, each packet producer of said plurality supporting a different data format (col. 6, lines 21-29).

As per claims 4 and 16, Krause discloses:

• wherein the stream reader obtains a streaming media asset in the form of a packetized stream of data and passes it to the stream processor (col. 6, lines 21-29).

As per claims 5 and 17, Krause discloses:

wherein the stream processor is configured to process data in accordance with a
predetermined format and places delivery time stamps on data packets received from
the stream reader (col. 10, lines 54-64).

As per claims 6 and 18, Krause discloses:

 wherein the stream reader and stream processor share a common thread of control (col. 10, lines 54-64).

As per claims 7 and 19, Krause discloses wherein the streaming media asset comprises:

packets having uniform size and delivery times at irregular intervals (col. 10, lines 54-64).

As per claims 8 and 20, Krause discloses:

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• wherein the streaming media asset comprises packets having variable size and delivery times at irregular intervals (col. 10, lines 54-64).

As per claims 9 and 21, Krause discloses wherein the streaming media asset comprises:

• packets having uniform size and delivery times of regular intervals (col. 6, lines 49-58).

As per claims 10 and 24, Krause further discloses:

• multiple feeder modules (col. 10, lines 38-64).

As per claims 11 and 25, Krause further discloses:

• multiple time stamped packet queues (col. 10, lines 20-37).

As per claim **54**, Krause discloses a computer program product for use in a client server computer architecture for delivering streaming media assets that can have a plurality of data formats to at least one client over a computer network, the computer program product including a program module that executes the steps of:

- acquiring at least one streaming media asset in packetized form (col. 7, lines 1-11 and col. 10, lines 54-64);
- placing time stamps on the packets specifying a delivery time for its respective packet (col. 7, lines 1-11 and col. 10, lines 54-64);
- adjusting the delivery time of at least one time stamp in accordance with a value indicating a pre read size capability of a receiving client (col. 7, lines 1-11 and col. 10, lines 54-64);
- maintaining a time stamp packet queue containing the packets with time stamps in a first in first out order (col. 10, lines 20-37);

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removing packets from the time stamp packet queue and transmitting the removed packets to a client via the computer network, the transmission for each packet concluded at least by the specified delivery time in each packet (col. 10, lines 38-64).

Claim Rejections - 35 USC § 103

- 3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 4. Claims 28 and 41-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krause in view of Meggers et al (hereinafter, "Meggers", U.S. Pat. No. 6,728,270).

As per claim 28, Krause discloses the invention substantially as claims discussed above.

However, Krause does not explicitly disclose wherein the feeder module further operative to control the admission of streaming media assets into the feeder that are to be delivered to a client, the control of admission comprising:

- computing a number of bytes that need to be delivered during the time window, the
 bytes comprising a first streaming media asset;
- translating the computed number of bytes into a first time to process value for the first streaming media asset; and
- admitting for delivery the first streaming media asset if the first time to process value is smaller than the time window.

Meggers discloses a scheduling and admission control of packet data traffic including:

- defining a time window in terms of a first duration of time (col. 6, lines 37-46);
- computing a number of bytes that need to be delivered during the time window, the bytes comprising a first streaming media asset (col. 6, lines 66-67 and col. 7, lines 1-7);
- translating the computed number of bytes into a first time to process value for the first streaming media asset (col. 7, lines 12-23); and
- admitting for delivery the first streaming media asset if the first time to process value is smaller than the time window (col. 7, lines 12-23).

Given the teaching of Meggers, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Krause by performing an admission control before delivery deadlines in order to admit packets for real time processing in a timely and efficient manner.

As per claim 41, Krause discloses in a delivery system for use in a client server computer architecture in which the server provides streaming media assets that can have a plurality of data formats to at least one client over a computer network, a method for delivering the streaming media assets comprising:

- acquiring at least one streaming media asset in packetized form, placing time stamps on the packets specifying a delivery time for its respective packet, and adjusting the delivery time of at least one time stamp in accordance with a value indicating a pre read size capability of a receiving client (col. 7, lines 1-11 and col. 10, lines 54-64);
- maintaining a time stamp packet queue containing the packets with time stamps in a first in first out order (col. 10, lines 20-37); and

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• removing packets from the time stamp packet queue and transmitting the removed packets to a client via the computer network, the transmission for each packet concluded at least by the specified delivery time in each packet (col. 10, lines 38-64).

As per claim 42, Krause discloses the claimed invention substantially as claims discussed above. However, Krause does not explicitly disclose:

• resolving delivery conflicts between at least two streaming media assets delivered simultaneously by the server to at least one client, wherein the at least one client has a pre read size value that indicates a capability of the client to pre read data, the streaming media assets comprising data packets having delivery time stamps.

Meggers discloses a scheduling and admission control of packet data traffic including:

• resolving delivery conflicts between at least two streaming media assets delivered simultaneously by the server to at least one client, wherein the at least one client has a pre read size value that indicates a capability of the client to pre read data, the streaming media assets comprising data packets having delivery time stamps (col. 12, lines 21-35).

Given the teaching of Meggers, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Krause by performing an admission control before delivery deadlines in order to admit packets for real time processing in a timely and efficient manner.

As per claim 43, Krause discloses the invention substantially as claims discussed above. However, Krause does not explicitly disclose:

detecting a delivery conflict between the at least two streaming media assets;

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 adjusting at least one of the time stamps to indicate an early delivery for at least one of the packets, wherein the adjusted time stamp is adjusted in accordance with the pre read

size value; and

• delivering the packets at least by times specified by the time stamps.

Meggers discloses a scheduling and admission control of packet data traffic including:

 detecting a delivery conflict between the at least two streaming media assets (col. 11, lines 57-66);

adjusting at least one of the time stamps to indicate an early delivery for at least one of
the packets, wherein the adjusted time stamp is adjusted in accordance with the pre read
size value (col. 12, lines 8-20); and

• delivering the packets at least by times specified by the time stamps (col. 12, lines 8-20).

Given the teaching of Meggers, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Krause by performing an admission control before delivery deadlines in order to admit packets for real time processing in a timely and efficient manner.

As per claim 44, Krause further discloses:

• the step of the client communicating the pre read size value to the server when the client requests delivery of a streaming media asset (col. 6, lines 45-57).

As per claim 45, Krause further discloses the steps of:

the server communicating to the client an optimum value for the pre read size value (col.
6, lines 45-57); and

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• the client allocating sufficient resources to accommodate the optimum value for the pre read size value (col. 7, lines 1-11).

As per claims 46, Krause discloses the invention substantially as claims discussed above. However, Krause does not explicitly disclose:

• resolving delivery conflicts between at least two streaming media assets delivered simultaneously by the server to at least one client, wherein the at least one client has a max buffer size value that indicates a capability of the client to accept delayed data, the streaming media assets comprising data packets having delivery time stamps.

Meggers discloses a scheduling and admission control of packet data traffic including:

• resolving delivery conflicts between at least two streaming media assets delivered simultaneously by the server to at least one client, wherein the at least one client has a max buffer size value that indicates a capability of the client to accept delayed data, the streaming media assets comprising data packets having delivery time stamps (col. 12, lines 21-35).

Given the teaching of Meggers, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Krause by performing an admission control before delivery deadlines in order to admit packets for real time processing in a timely and efficient manner.

As per claim 47, Krause discloses the invention substantially as claims discussed above. However, Krause does not explicitly disclose:

• detecting a delivery conflict between the at least two streaming media assets;

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adjusting at least one of the time stamps to indicate an early delivery for at least one of
the packets, wherein the adjusted time stamp is adjusted in accordance with max buffer
size value; and

• delivering the packets at least by times specified by the time stamps.

Meggers discloses a scheduling and admission control of packet data traffic including:

- detecting a delivery conflict between the at least two streaming media assets (col. 11, lines 57-66);
- adjusting at least one of the time stamps to indicate an early delivery for at least one of
 the packets, wherein the adjusted time stamp is adjusted in accordance with the pre read
 size value (col. 12, lines 8-20); and
- delivering the packets at least by times specified by the time stamps (col. 12, lines 8-20).

Given the teaching of Meggers, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Krause by performing an admission control before delivery deadlines in order to admit packets for real time processing in a timely and efficient manner.

As per claim 48, Krause further discloses:

• the step of the client communicating the max buffer size value to the server when the client requests delivery of a streaming media asset (col. 6, lines 45-57).

As per claim 49, Krause further discloses:

• the steps of the server communicating to the client an optimum value for the max buffer size value (col. 6, lines 45-57); and

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• the client allocating sufficient resources to accommodate the max buffer size value having the optimum value (col. 7, lines 1-11).

As per claim **50**, Krause discloses the invention substantially as claims discussed above. However, Krause does not explicitly disclose:

• controlling the admission of streaming media assets into the time stamp packet queue that are to be delivered to a client.

Meggers discloses a scheduling and admission control of packet data traffic including:

• controlling the admission of streaming media assets into the time stamp packet queue that are to be delivered to a client (abstract and col. 11, lines 46-56).

Given the teaching of Meggers, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Krause by performing an admission control before delivery deadlines in order to admit packets for real time processing in a timely and efficient manner.

As per claims **52**, Krause discloses the invention substantially as claims discussed above. However, Krause does not explicitly disclose:

 resolving delivery conflicts between at least two streaming media assets delivered simultaneously by the server to at least one client, wherein the at least one client has a pre read size value that indicates a capability of the client to pre read data, the streaming media assets comprising data packets having delivery time stamps.

Meggers discloses a scheduling and admission control of packet data traffic including:

• resolving delivery conflicts between at least two streaming media assets delivered simultaneously by the server to at least one client, wherein the at least one client has a pre

read size value that indicates a capability of the client to pre read data, the streaming media assets comprising data packets having delivery time stamps (col. 12, lines 21-35).

Given the teaching of Meggers, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Krause by performing an admission control before delivery deadlines in order to admit packets for real time processing in a timely and efficient manner.

As per claim 53, Krause discloses the invention substantially as claims discussed above. However, Krause does not explicitly disclose:

- detecting a delivery conflict between the at least two streaming media assets;
- adjusting at least one of the time stamps to indicate an early delivery for at least one of
 the packets, wherein the adjusted time stamp is adjusted in accordance with the pre read
 size value; and
- delivering the packets at least by times specified by the time stamps.
 Meggers discloses a scheduling and admission control of packet data traffic including:
- detecting a delivery conflict between the at least two streaming media assets (col. 11, lines 57-66);
- adjusting at least one of the time stamps to indicate an early delivery for at least one of
 the packets, wherein the adjusted time stamp is adjusted in accordance with the pre read
 size value (col. 12, lines 8-20); and
- delivering the packets at least by times specified by the time stamps (col. 12, lines 8-20).

 Given the teaching of Meggers, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Krause by performing an admission control before

delivery deadlines in order to admit packets for real time processing in a timely and efficient manner.

As per claims 55 and 56, Krause discloses the invention substantially as claimed. However, Krause does not explicitly disclose:

- providing a space window comprising a value representing an amount of contiguously stored data;
- scanning with the space window a file containing a media asset to be transmitted from the server computer system to the client computer system; and
- returning a value representing the shortest duration of time over which the data contained
 in the space window can be delivered according to time stamps placed in the plurality of
 packets.

Meggers discloses a scheduling and admission control of packet data traffic including:

- controlling the admission of streaming media assets into the time stamp packet queue that are to be delivered to a client (abstract and col. 11, lines 46-56), the control of admission comprising:
- providing a space window comprising a value representing an amount of contiguously stored data (col. 6, lines 37-46);
- scanning with the space window a file containing a media asset to be transmitted from the server computer system to the client computer system (col. 6, lines 66-67 and col. 7, lines 1-7);

returning a value representing the shortest duration of time over which the data contained
in the space window can be delivered according to time stamps placed in the plurality of

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packets (col. 7, lines 12-23).

Given the teaching of Meggers, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Krause by performing an admission control before delivery deadlines in order to admit packets for real time processing in a timely and efficient manner.

Allowable Subject Matter

5. Claims 27 and 51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments filed April 7, 2006 have been fully considered but they are not persuasive.

The Office notes the following arguments:

a. There is no disclosure, teaching or suggestion in Krause of a "delivery system for use in a client server computer architecture in which the server provides streaming media assets to at least one client over a computer network" wherein packets of the streaming media assets are transmitted "to a client via the computer network according to the time stamp in each packet by

first removing the packets from a "time stamp queue" with the packets placed in the queue "in a first in, first out order.

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b. There is no disclosure, teaching or suggestion in Krause that packets from multiple program streams having different data formats be demultiplexed, let alone delivered to a client according to time stamps placed in them after the packets have been encoded in any one of the different formats.

c. Meggers does not teach, suggest or motivate the admission control method performed by the feeder module of the present invention.

In response to:

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(a)-(c), Krause teaches a method and apparatus for increasing channel utilization for digital video transmission which utilizes the well known technique of variable bit-rate encoding and decoding of video data. The multiplexer orders the packets according to the sequence in which they are to be decoder at the respective decoder. The multiplexer determines the order of sending data packets of programs streams into the data channel. The program streams are stored in a buffer to be decoded (Krause, col. 7, lines 1-11 and col. 10, lines 20-64). Meggers discloses a method and apparatus for scheduling and admission control of packet data packet in which data packets are processed in real-time and sorted at the packet scheduler into a queue FIFO in their order of appearance (abstract, col. 3, lines 47-67 and col. 11, lines 46-56). Applicant is reminded that the examiner is entitled to the broadest reasonable interpretation of the claims. The Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater 162 USPQ 541, 550-51 (CCPA 1969). Hence, for the above reasons,

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it is believed that the rejection under 35 U.S.C. 103 provides substantial evidence to support the rationale statement in the above rejection. The rejection under 35 U.S.C. 103 should be sustained.

Conclusion

7. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaShonda T. Jacobs whose telephone number is 571-272-4004. The examiner can normally be reached on 8:30 A.M.-5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LaShonda T Jacobs Examiner Art Unit 2157

October 14, 2006

PRIMARY EXAMINER
TECHNOLOGY CENTER 2100